



Registration Number:

Date & Session

**ST. JOSEPH'S UNIVERSITY, BENGALURU -27**  
**B. Sc Statistics – I SEMESTER**  
**SEMESTER EXAMINATION: OCTOBER 2023**  
(Examination conducted in December 2023)  
**ST 121: Descriptive Statistics**

**Time: 2 Hours**

**Max Marks: 60**

**This paper contains ONE printed page and THREE parts**

**PART-A**

**I. Answer any FIVE from the following**

**3 \* 5 = 15**

1. Briefly describe the scope of Statistics.
2. Distinguish between Stratified sampling and Cluster sampling.
3. Explain the difference between Coefficient of determination and Coefficient of correlation.
4. Define simple linear regression? State its assumptions.
5. Describe median for grouped and ungrouped data.
6. What do you mean by Boxplots? Why it is useful?
7. Explain the steps involved in construction of frequency table.

**PART – B**

**II. Answer any FIVE from the following**

**5 \* 5 = 25**

8. Explain about the various types of data with an example for each.
9. What is Correlation? Explain its different types.
10. Prove that correlation coefficient lies between -1 and +1.
11. Briefly describe geometric and harmonic means. List out the merits and limitations of the same.
12. State and prove any two properties of Arithmetic mean.
13. Explain in detail about Yule's measure of association.
14. A) Explain the concept of mean vector and dispersion matrix in multivariate data.
15. B) Name the tools for visualizing multivariate data. (3+2)

**PART – C**

**III. Answer any TWO from the following**

**10 \* 2 = 20**

16. A) Explain in detail Partial & Multiple correlations? Give their merits and demerits.  
B) What are Stem and Leaf plots? Give an example. (8+2)
17. A) Briefly describe the procedure of Spearman's rank correlation.  
B) Derive the expression for finding Karl Pearson's coefficient of correlation. (5+5)
18. A) Describe briefly all the absolute and relative measures of dispersion.  
B) Define kurtosis. Mention its three types. (7+3)

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